

CLAIMS

What is claimed is:

5 1. A method for partitioning a video image between a foveated area and a background area comprising the steps of:

defining at least one foveation point in the video image;

10 using a determining means for defining at least one foveated area in proximity to said foveation point;

extracting a first plurality of data signals representing said foveated area; and

extracting a second plurality of data signals representing a background area.

15 2. The method according to Claim 1, wherein the step of defining said foveation point comprises the step of pointing a video device at a location of the image using a pointing means.

20 3. The method according to Claim 2, wherein the pointing means comprises at least one device from the group consisting of: a computer keyboard; a computer mouse; a joystick, and an eye tracking device.

4. The method according to Claim 1, wherein the determining means comprises a comparison of an average signal of a group consisting of at least two picture elements (pixels) with a predetermined threshold signal, and

incorporating said pixels in said foveated area if said pixel group signal is greater than said threshold signal.

5 5. The method according to Claim 4, wherein the threshold and pixel signals comprise frequencies.

6. A method for the processing and transmitting of video image data from a first electronic device to a second electronic device, comprising the steps of:

10 defining at least one foveation point in a video image in the first electronic device;

 using a determining means to define at least one foveated area around said foveation point;

 extracting a first plurality of data signals representing said foveated area;

15 extracting a second plurality of data signals representing a background area;

 creating a first and second processed signal from said first and second pluralities of data signals using a first and second processing means, respectively;

20 transmitting said first and second processed signals;

 receiving and processing said first and second processed signals at the second electronic device using a third and fourth processing means; and

combining the output signals from said third and fourth processing means to create a video image which is generally equivalent to the original video image.

7. The method according to Claim 6, wherein the step of defining said foveation point comprises the step of pointing the first video device at a point of interest using a pointing means.

8. The method according to Claim 7, wherein the pointing means comprises at least one device from the group consisting of: a computer keyboard; a computer mouse; a joystick, and an eye tracking device.

9. The method according to Claim 6, wherein the determining means comprises a comparison of an average signal from a group consisting of at least two picture element (pixel) with a predetermined threshold signal, and incorporating said pixel in said foveal area if said pixel group signal is greater than said threshold signal.

10. The method according to Claim 9, wherein the threshold and pixel group signals comprise frequencies.

11. The method according to Claim 6, wherein the first plurality of data signals comprises all pixel signals included in a high-resolution area of said video image.

5 12. The method according to Claim 6, wherein the first plurality of data signals comprises all pixel signals that are included in a high motion area of said video image.

10 13. The method according to Claim 6, wherein the first processing means comprises at least one from the group consisting of parity checks, cyclic redundancy checks, forward error correction algorithms, or error resiliency conforming to video communications industry standards H263++ and/or MPEG-4.

15 14. The method according to Claim 6, wherein the second processing means comprises at least one from the group consisting of parity checks, cyclic redundancy checks, forward error correction algorithms, or error resiliency conforming to video communications industry standards H263++ and/or MPEG-4.

20 15. The method according to Claim 6, wherein the third processing means comprises at least one from the group consisting of parity checks, cyclic

redundancy checks, forward error correction algorithms, or error resiliency conforming to video communications industry standards H263++ and/or MPEG-4.

5 16. The method according to Claim 6, wherein the fourth processing means comprises at least one from the group consisting of parity checks, cyclic redundancy checks, forward error correction algorithms, or error resiliency conforming to video communications industry standards H263++ and/or MPEG-4.

10 17. The method according to Claim 6, additionally includes the step of transmitting a return error signal to the first video device for changing the foveation point.

15 18. The method according to Claim 6, wherein the transmitting of said second processed signal occurs at a predetermined time after the transmitting of said first processed signal.

20 19. The method according to Claim 6, wherein the transmitting of said first processed signal occurs at a predetermined time after the transmitting of said second processed signal.

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